

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended): A method for the verification of anti-jamming in a communications system ~~comprising~~ having several sensors or adaptive antennas, comprising at least the following steps :

[[ \* ]] estimating [[the]] a mean power  $\pi_y^{\wedge}$  of the output of the communications system,

[[\*]] estimating [[the]] a respective power values  $P_u$  or  $P'u$ , of a station  $u$ , the antenna noise  $P_a$  or  $P'a$ , the thermal noise  $P_T$ , or  $P'T$ ,

[[\*]] estimating at least one of the following ratios :

$$J_{tot}/S_{tot} = \left( \sum_{p=1}^P ; ; P_p \right) / \left( \sum_{u=1}^U ; ; P_u \right)$$

[[ (22) ]]

with  $p$  = the jamming unit

= sum of the power values of the residual jamming units/sum of the power values of the stations on the reception band  $B[.]$

$$J_{tot}/S_u = \left( \sum_{p=1}^P ; ; P_p \right) / P_u$$

[[ (23) ]]

= sum of the power values of the residual jamming units/power of the station  $u$  in the reception band  $B$ .

$$J_u / S_u = \left( \sum_{p=1}^P P_{pu} \right) / P_u$$

[[ (24) ]]

[[W]] with  $P_{pu}$  = power of the jamming unit  $p$  in the reception band  $B_u$ .

- comparing at least one of the three ratios with a threshold value.

2. (currently amended): [[A]] The method for the verification of anti-jamming according to claim 1, comprising ~~at least one~~ a step for estimating the mean power  $\pi_y^{\wedge}$ , for an output from a number  $K$  of samples,  $y(k)$ ,  $1 \leq k \leq K$  ~~of this output~~ of this output, given by

$$\pi_y^{\wedge} = \frac{1}{K} \sum_{k=1}^K |y(k)|^2$$

[[ (25) ]]

3. (currently amended): [[A]] The method for the verification of anti-jamming according to claim 1, comprising a step of estimation  $P_u^{\wedge}$ ,  $P_u^{\wedge}$  of the power  $P_u$ ,  $P_u'$  in using, firstly, ~~a~~ priori ~~a priori~~ knowledge of the parameters  $w$  and  $G_{num}$  for a digital application of the adaptive filters and  $|\alpha|^2$ ,  $w$  and  $G$  for an analog application of the filters and secondly the estimation of the parameters  $\pi_u$  and  $S_u$ .

4. (currently amended): [[A]] The method for the verification of anti-jamming according to claim 1, comprising an estimation  $P_u^{\wedge}$ ,  $P_u^{\wedge}$  of the power  $P_u$ ,  $P_u'$  in using, firstly, ~~a~~ priori ~~a priori~~ knowledge of the parameters  $w$  and  $G_{num}$  for a digital application of the adaptive filters and  $|\alpha|^2$ ,  $w$  and  $G$  for an analog application of the filters and secondly the estimation of the parameter  $\eta_a$ .

5. (currently amended): [[A]] The method for the verification of anti-jamming according to claim 1, comprising a step of estimation  $\hat{P}_u, \hat{P}'_u$  of the power  $P_u, P'_u$  in using ~~a-priori~~ a priori knowledge of the parameters  $w$  and  $G_{num}$  for a digital application of the adaptive filters and  $|\alpha|^2, w$  and  $G$  for an analog application of the filters and secondly the estimation of the parameter  $\eta_T$ .

6. (currently amended): [[A]] The method for the verification of anti-jamming according to ~~one of the claim~~[[s]] 1, ~~2, 3, 4 and 5~~ comprising a step of estimation  $\hat{J}_{tot} / \hat{S}_{tot}$ , of the ratio  $J_{tot}/S_{tot}$  given by

$$\hat{J}_{tot} / \hat{S}_{tot} = (\hat{\pi}_y - \sum_{u=1}^U \hat{P}_u - \hat{P}_a - \hat{P}_T) / (\sum_{u=1}^U \hat{P}_u) \quad (26)$$

7. (currently amended): [[A]] The method for the verification of anti-jamming according to ~~one of the claim~~[[s]] 1, ~~2, 3, 4 and 5~~ comprising a step of estimation  $\hat{J}_{tot} / \hat{S}_u$ , of the ratio  $J_{tot}/S_u$ , given by

$$\hat{J}_{tot} / \hat{S}_u = (\hat{\pi}_y - \sum_{u=1}^U \hat{P}_u - \hat{P}_a - \hat{P}_T) / \hat{P}_u \quad (27)$$

8. (currently amended): [[A]] The method of verification of anti-jamming according to [[the]] claim[[s]] 1, ~~2, 3, 4 and 5~~ comprising a step of estimation  $\hat{J} / \hat{S}_u$ , of the ratio  $J / S_u$  in using the total power of residual jamming units in the  $B_u$  band of the working station  $u$  given by

$$J_u^{\wedge} / S_u^{\wedge} = (\pi_{yu}^{\wedge} - P_u^{\wedge} - \sum_{v \neq u} (P_{vu}^{\wedge} - P_{au}^{\wedge} - P_{Tu}^{\wedge}) / P_u^{\wedge})$$

(28)

9. (currently amended): A method of verification of anti-jamming according to ~~one of~~ the claim[[s]] 1 ~~to 8~~ comprising a step of determination of the precision of estimation, and wherein this value is used to set the threshold.

10. (currently amended): A system for the verification of anti-jamming in a communications system comprising several sensors or adaptive antennas, a ground station and a piloting device, comprising at least the following elements: for a verification by channel, from the ground and for a reception band B, a computer integrated into the piloting device and an onboard computer, the two computers being programmed to execute the following steps :

~~Communications Channel Power Measurement~~: Onboard function ~~parametrized~~ parameterized from the ground by the ~~Onboard Param VAA~~ Onboard Param Vaa function,

~~VAA Gain~~: Ground function,

~~Communications channel power measurement~~: onboard function, VAA Processing ~~VAA Processing~~: Ground function.

11. (currently amended): A system for the verification of anti-jamming in a communications system comprising several sensors or adaptive antennas, a ground station and a piloting device, comprising at least the following elements :

for a verification by station, an onboard computer and a ground computer, the computers being programmed to execute the following functions :

~~Communications Channel Power Measurement~~: onboard function ~~parametrized~~ parameterized from the ground by the ~~Onboard Param VAA~~ Onboard Param Vaa function,

~~VAA Gain~~: ground function,

~~Acquisition of Communications Channel~~: onboard function ~~parametrized~~ parameterized from the ground by the ~~Onboard Param VAA~~ Onboard Param Vaa function, ~~VAA Processing~~: ground function.

12. (currently amended): A use of the method according to claim 1 ~~or of the system according to one of the claims 10 and 11 to a space communications system.~~

13. (new): A use of the system according to claim 10 ~~[[to]]~~ for a space communications system.

14. (new): A use of the system according to claim 11 ~~[[to]]~~ for a space communications system.